REMARKS

By an Office Action dated December 16, 2005, the Examiner in charge of this case rejected the claims of this application on a variety of grounds. The applicants have responded by submitting the amendments and comments set forth hereinbelow. Based on this submission, reconsideration of the merits of this patent application is respectfully requested.

The rejections applied against the claims of this patent application are both based on the newly cited reference to Root. The applicants feel that Root is inapplicable and does not disclose what the Examiner states that Root discloses. The difference has been emphasized by relatively minor changes made to the claims above.

In essence, the claims as pending in this application describe a planar array for depositing samples on the microarray. This is the simplest possible type of sample loading array, a planar member having two opposed surfaces such as illustrated at 20 in Fig. 1. The samples are placed in the channels, which are holes drilled through the planar member, and the membrane 26 is applied to the planar array on the side opposite from the microarray. None of these features are described in Root.

Root describes a much more elaborate composite sample loading assembly. The sample loading area 80 referenced by the Examiner in Root is not a planar member, but is instead a highly elaborately shaped three dimensional structure. There are porous membranes in Root, as the Examiner noted at 34, but those are on the side of Root toward the "array" and not on the side of the sample loading array away from the microarray, as required by the claims. There are no planar surfaces on either end of the loading array of Root and the microchannels are not at all "micro," but are in fact wide vessels. Root does not disclose an apparatus which can be used on a microarray.

Microarrays of the type described in this patent application contain hundreds of thousands of features in very small areas. It is not possible to mold an elaborate three dimensional structure of the type described by Root on a scale that would permit individual loading to areas of the microarray. Only something as simple as described in Figure 1 can possibly work at this scale. The problem with having a sample size that is so small, such as is appropriate for large scale microarray samples, is that the samples dehydrate or dry in place. Biological samples suspended in small volumes of water inevitably dry out. It is for that reason that the membrane 28 is applied to the side of the sample array away from the

microarray. By wetting the porous membrane 28, the samples in the microchannels 24 can be rehydrated and a flow across to microarray for hybridization. Nothing in Root describes such a feature. Nowhere in Root is there a membrane on the opposite side of the sample array from the microarray. Nowhere in Root is a simply planar sample array disclosed. For these reasons it is submitted that Root does not make obvious a sample array which can work with a microarray of the type described here and does not make obvious the claims of the present invention.

The secondary references cited by the Examiner do not satisfy the deficiencies and the teachings of Root. Accordingly, the combination of references with Root also does not make obvious the claims of the present application.

A request for continued examination is filed herewith as well as a petition for extension of time so that this response will be considered timely filed and so the merits of this patent application will be reexamined. Please charge the extension fee to Deposit Account No. 17-0055.

Respectfully submitted,

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